Acupuncture for knee osteoarthritis: a randomized trial using a novel sham

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Background: Evidence on the efficacy of acupuncture for reducing the pain and dysfunction of osteoarthritis is equivocal.
Objective: To determine whether acupuncture provides greater pain relief and improved function compared with sham acupuncture or education in patients with osteoarthritis of the knee.
Design: Randomized, controlled trial.
Setting: Two outpatient clinics (an integrative medicine facility and a rheumatology facility) located in academic teaching hospitals and 1 clinical trials facility.
Patients: 570 patients with osteoarthritis of the knee (mean age [±SD], 65.5 ± 8.4 years).
Intervention: 23 true acupuncture sessions over 26 weeks. Controls received 6 two-hour sessions over 12 weeks or 23 sham acupuncture sessions over 26 weeks.
Measurements: Primary outcomes were changes in the Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) pain and function scores at 8 and 26 weeks. Secondary outcomes were patient global assessment, 6-minute walk distance, and physical health scores of the 36-Item Short-Form Health Survey (SF-36).
Results: Participants in the true acupuncture group experienced greater improvement in WOMAC function scores than the sham acupuncture group at 8 weeks (mean difference, -2.9 [95% CI, -5.0 to -0.8]; P= 0.01) but not in WOMAC pain score (mean difference, -0.5 [CI, -1.2 to 0.2]; P= 0.18) or the patient global assessment (mean difference, 0.16 [CI, -0.02 to 0.34]; P> 0.2). At 26 weeks, the true acupuncture group experienced significantly greater improvement than the sham group in the WOMAC function score (mean difference, -2.5 [CI, -4.7 to -0.4]; P= 0.01), WOMAC pain score (mean difference, -0.87 [CI, -1.58 to -0.16]; P= 0.003), and patient global assessment (mean difference, 0.26 [CI, 0.07 to 0.45]; P= 0.02).
Limitations: At 26 weeks, 43% of the participants in the education group and 25% in each of the true and sham acupuncture groups were not available for analysis.
Conclusions: Acupuncture seems to provide improvement in function and pain relief as an adjunctive therapy for osteoarthritis of the knee when compared with credible sham acupuncture and education control groups.

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